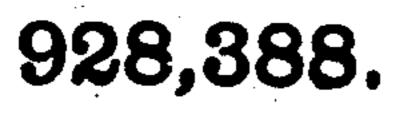
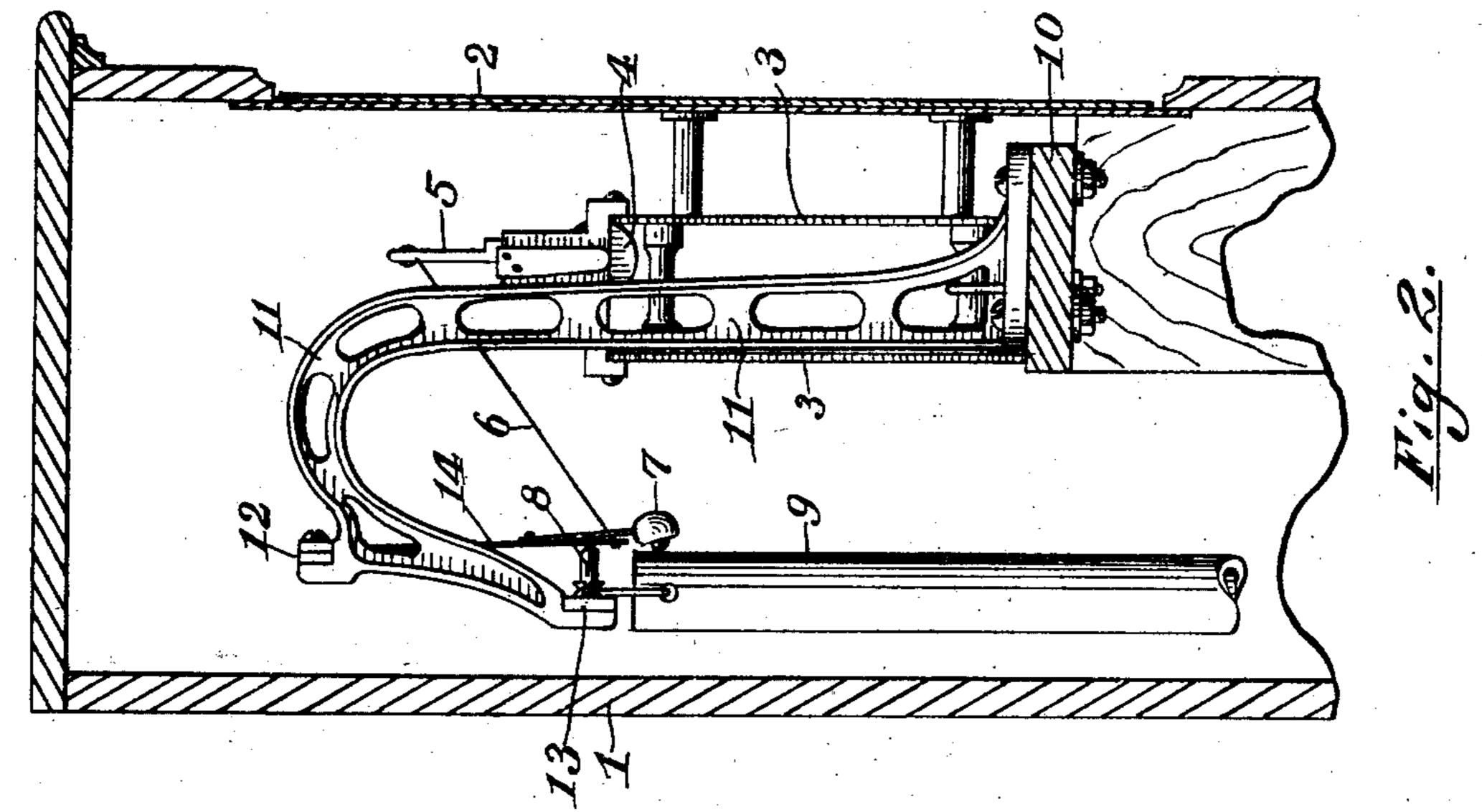
P. H. KLEIN, JR.

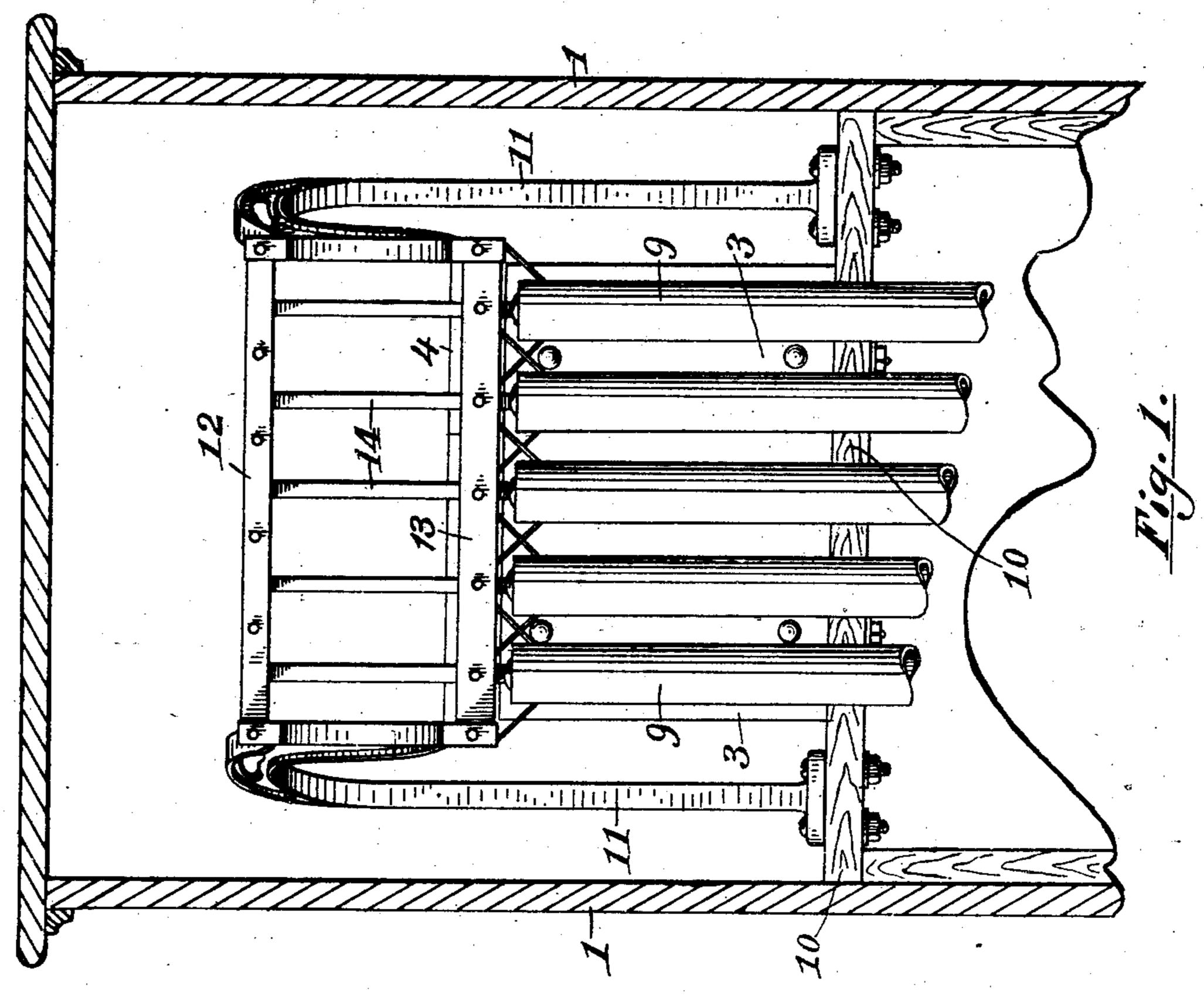
CHIME CLOCK.

APPLICATION FILED FEB. 16, 1909.



Patented July 20, 1909.





Witnesses W. O. Van autwerp. Leargiana Chace. Philip H. Klein dr.

By

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UNITED STATES PATENT OFFICE.

PHILIP HENRY KLEIN, JR., OF NEW YORK, N. Y., ASSIGNOR TO JAMES T. PHILLIPS, OF GRAND RAPIDS, MICHIGAN.

CHIME-CLOCK.

No. 928,388.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed February 16, 1909. Serial No. 478,270.

To all whom it may concern:

Be it known that I, PHILIP HENRY KLEIN, Jr., a citizen of the United States of America, residing at New York, in the county of New 5 York and State of New York, have invented certain new and useful Improvements in Chime-Clocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable 10 others skilled in the art to which it apper-

tains to make and use the same.

My invention relates to improvements in chime clocks and its object is to prevent any misplacement of the bell mechanism due to 15 warping or shrinkage of the case, and to provide the device with certain new and useful features, hereinafter more fully described and particularly pointed out in the claims. Heretofore the bells in such clocks have been 20 mounted upon, or supported by, the case at some point independent of the support for the clock mechanism proper, the result being that shrinkage or warping of the clock case often changes the relative position of the 25 bells and striking mechanism, whereby the device is not properly operated.

My invention consists in providing rigid metallic brackets to support the bells and striking mechanism therefor, which brackets 30 are mounted upon the same support to which the clock mechanism is attached, whereby the adjustment of the clock and bells is effectually maintained regardless of any change in the case, as will more fully appear by refer-35 ence to the accompanying drawings, in

which:

Figure 1. is a rear elevation of a device embodying my invention with the clock mechanism omitted; and Fig. 2. a side elevation 40 of the same together with the frame of the

clock. 1 represents the clock case; 2 the dial of the same; 3 the clock mechanism; 4 the striking cylinder of the clock; 5 one of the 45 levers to operate one of the strikers for the bells; 6 a connecting wire from the lever to the bell hammer 7; 8 the bell hammer stop to hold the same normally out of contact with the bell; 9 the chime bells of the clock; 50 10 the seat board on which the clock mechanism is mounted; and 11 brackets mounted on the seat board at the respective sides of l

the clock mechanism, said brackets being preferably rigid metallic castings and supporting the bars 12 and 13. Upon the bar 12 55 is mounted the flexible arms 14 supporting the hammers 7 and the bar 13 supports the bells. The seat board 10 and bars 12 and 13 are of like material preferably of hard wood and being arranged with the grain in parallel 60 lines, will not in any wise change the location of the parts supported thereby should they shrink or swell. The metal brackets 11 are also sufficiently stable so that there will be no relative change in position of the clock and 65 bell mechanism. Furthermore by mounting the entire clock and bell mechanism upon a single supporting member, to-wit the seat board 10, renders the structure more convenient for removal, adjustment and replace- 70 ment within the clock case as occasion requires.

I have not fully illustrated the clock mechanism 3, the striking cylinder 4, and levers 5, for that they are common and well known in 75 such devices and their location and relation to other parts readily understood. The essential novelty of my device being in the supporting means for the clock mechanism and bell striking mechanism, whereby they are 80 all maintained in proper relation and all supported on the seat board only, whereby they are all easily and simultaneously removed and replaced and readily adjusted when out-

side the case.

What I claim is:

1. A chime clock, comprising a frame, a seat-board in the frame, a clock mounted on the seat-board, brackets also mounted on said seat-board, and chime bells suspended 90 from the brackets.

2. A chime clock, comprising a frame, a seat-board detachably supported in the frame, a clock and brackets mounted on the seat-board and carried thereby, bars sup- 95 ported by the brackets in parallel relation to the seat-board, and chime bells and strikers carried by the bars.

In testimony whereof I affix my signature in presence of two witnesses.

PHILIP HENRY KLEIN, JR.

Witnesses: K. G. LEARD, ROBERT W. GABBY.